UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

22850

7590

08/02/2010

EXAMINER

MANDEVILLE, JASON M

ART UNIT PAPER NUMBER

2629

DATE MAILED: 08/02/2010

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314

APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. 10/586,263 07/18/2006 Atsushi Nakadaira 293589US40PCT 2821

TITLE OF INVENTION: 3D DISPLAYING METHOD, DEVICE AND PROGRAM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	11/02/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

Commissioner for Patents P.O. Box 1450

Alexandria, Virginia 22313-1450 (571)-273-2885 or <u>Fax</u>

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

Note: A certificate of mailing can only be used for domestic mailings of the CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address) Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission. 22850 7590 08/02/2010 Certificate of Mailing or Transmission OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L. Phereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below. 1940 DUKE STREET ALEXANDRIA, VA 22314 (Depositor's name (Signature (Date APPLICATION NO. FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. FILING DATE 10/586.263 07/18/2006 Atsushi Nakadaira 293589US40PCT 2821 TITLE OF INVENTION: 3D DISPLAYING METHOD, DEVICE AND PROGRAM APPLN. TYPE SMALL ENTITY ISSUE FEE DUE PUBLICATION FEE DUE PREV. PAID ISSUE FEE TOTAL FEE(S) DUE DATE DUE nonprovisional NO \$1510 \$300 \$0 \$1810 11/02/2010 **EXAMINER** ART UNIT CLASS-SUBCLASS MANDEVILLE, JASON M 2629 345-006000 1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). 2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. or agents OR, alternatively, (2) the name of a single firm (having as a member a ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment. (A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY) 4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) 4a. The following fee(s) are submitted: ☐ Issue Fee A check is enclosed. Publication Fee (No small entity discount permitted) Payment by credit card. Form PTO-2038 is attached. The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number ______ (enclose an extra copy of this fo Advance Order - # of Copies _ (enclose an extra copy of this form). 5. Change in Entity Status (from status indicated above) a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ■ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2). NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office. Authorized Signature Date Typed or printed name Registration No. This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450

P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/586,263	07/18/2006	Atsushi Nakadaira	293589US40PCT	2821	
22850 75	90 08/02/2010		EXAMINER		
OBLON, SPIVA	K, MCCLELLAND	MANDEVILLE, JASON M			
1940 DUKE STRE		ART UNIT	PAPER NUMBER		
ALEXANDRIA, V	'A 22314		2629		

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 308 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 308 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	Application No.	Applicant(s)					
	10/586,263	NAKADAIRA ET AL.					
Notice of Allowability	Examiner	Art Unit					
	JASON M. MANDEVILLE	2629					
The MAILING DATE of this communication appears on the cover sheet with the correspondence address All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.							
1. This communication is responsive to 14 July 2010.							
2. X The allowed claim(s) is/are Claims 7, 8, 12, 19, 20, 24, and	d 37-44 (now renumbered Claims 1-1	<u>14)</u> .					
 3. Acknowledgment is made of a claim for foreign priority una) All b) Some* c) None of the: 1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority documents have International Bureau (PCT Rule 17.2(a)). * Certified copies not received: 	been received. been received in Application No		tion from the				
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		complying with the red	quirements				
4. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give			OTICE OF				
5. CORRECTED DRAWINGS (as "replacement sheets") mus	st be submitted.						
(a) ☐ including changes required by the Notice of Draftspers	on's Patent Drawing Review (PTO-	948) attached					
1) hereto or 2) to Paper No./Mail Date							
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date							
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in the	.84(c)) should be written on the drawir he header according to 37 CFR 1.121(o	ngs in the front (not the d).	back) of				
6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.							
 Attachment(s) 1. ☑ Notice of References Cited (PTO-892) 2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 3. ☑ Information Disclosure Statements (PTO/SB/08),	5. ☐ Notice of Informal Pa 6. ☐ Interview Summary Paper No./Mail Dat 7. ☑ Examiner's Amendn 8. ☑ Examiner's Stateme 9. ☐ Other	(PTO-413), e nent/Comment	wance				

Art Unit: 2629

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Sameer Gokhale on 26 July 2010.

- 2. The application has been amended as follows:
- 3. Amended **Claim 7** now reads:
 - 7. (Currently Amended) A three-dimensional display method for displaying two-dimensional images, by changing brightness, on a plurality of display planes placed at different depth positions as seen from an observer to display a three-dimensional stereoscopic image, the method comprising:

generating first two-dimensional images that are obtained by projecting a background plane onto the plurality of display planes along a line of sight of the observer, and displaying the first two-dimensional images on the display planes respectively wherein brightness of each of the first two-dimensional images is determined independently for each display plane according to a depth position of

Art Unit: 2629

a display object in a three-dimensional space [[if]] when brightness of the display object is darker than that of the background plane; and

generating second two-dimensional images that are obtained by projecting the display object onto the plurality of display planes along the line of sight of the observer, and displaying the second two-dimensional images on the display planes respectively in which brightness of each of the second two-dimensional images is set to be the same among the display planes irrespective of the depth position of the display object [[if]] when the brightness of the display object is darker than that of the background plane, wherein,

the display object is character information;

the background plane is a background of a screen on which the character information is input or edited; and

a background plane of lines after a line including a cursor indicating an inputting or editing position of the character information is displayed at a depth position different from a depth position at which a background plane of the line including the cursor and lines before the line including the cursor is displayed.

4. Amended Claim 8 now reads:

8. (Currently Amended) A three-dimensional display method for displaying twodimensional images, by changing brightness, on a plurality of display planes

Art Unit: 2629

placed at different depth positions as seen from an observer to display a threedimensional stereoscopic image, the method comprising:

generating first two-dimensional images that are obtained by projecting a background plane onto the plurality of display planes along a line of sight of the observer, and displaying the first two-dimensional images on the display planes respectively wherein brightness of each of the first two-dimensional images is determined independently for each display plane according to a depth position of a display object in a three-dimensional space [[if]] when brightness of the display object is darker than that of the background plane; and

generating second two-dimensional images that are obtained by projecting the display object onto the plurality of display planes along the line of sight of the observer, and displaying the second two-dimensional images on the display planes respectively in which brightness of each of the second two-dimensional images is set to be the same among the display planes irrespective of the depth position of the display object [[if]] when the brightness of the display object is darker than that of the background plane, wherein,

the display object is character information;

the background plane is a background of a screen on which the character information is input or edited; and

a background plane of a line including a cursor indicating an inputting or editing position of the character information and lines after the line including the

Art Unit: 2629

cursor is displayed at a depth position different from a depth position at which a background plane of lines before the line including the cursor is displayed.

5. Amended Claim 12 now reads:

12. (Currently Amended) A three-dimensional display method for displaying two-dimensional images, by changing brightness, on a plurality of display planes placed at different depth positions as seen from an observer to display a three-dimensional stereoscopic image, the method comprising:

generating first two-dimensional images that are obtained by projecting a background plane onto the plurality of display planes along a line of sight of the observer, and displaying the first two-dimensional images on the display planes respectively wherein brightness of each of the first two-dimensional images is determined independently for each display plane according to a depth position of a display object in a three-dimensional space [[if]] when brightness of the display object is darker than that of the background plane; and

generating second two-dimensional images that are obtained by projecting the display object onto the plurality of display planes along the line of sight of the observer, and displaying the second two-dimensional images on the display planes respectively in which brightness of each of the second two-dimensional images is set to be the same among the display planes irrespective of the depth

position of the display object [[if]] when the brightness of the display object is darker than that of the background plane, wherein,

the display object is character information;

the background plane is a background of a table or a menu in which character information are arranged and from which a piece of character information can be selected; and

a background plane of a selected character information part is displayed at a depth position different from a depth position at which a background plane of other character information is displayed.

6. Amended Claim 19 now reads:

19. (Currently Amended) A three-dimensional display apparatus for displaying two-dimensional images, by changing brightness, on a plurality of display planes placed at different depth positions as seen from an observer to display a three-dimensional stereoscopic image, the apparatus comprising:

first means for generating first two-dimensional images that are obtained by projecting a background plane onto the plurality of display planes along a line of sight of the observer;

second means for displaying the first two-dimensional images generated by the first means on the display planes respectively wherein brightness of each of the first two-dimensional images is determined independently for each display Art Unit: 2629

plane according to a depth position of a display object in a three-dimensional space [[if]] when brightness of the display object is darker than that of the background plane so as to display the background plane at an arbitrary position in the three dimensional space;

third means for generating second two-dimensional images that are obtained by projecting the display object onto the plurality of display planes along the line of sight of the observer; and

fourth means for displaying the second two-dimensional images generated by the third means on the display planes respectively in which brightness of each of the second two-dimensional images is set to be the same among the display planes irrespective of the depth position of the display object [[if]] when the brightness of the display object is darker than that of the background plane, wherein,

the display object is character information;

the background plane is a background of a screen on which the character information is input or edited; and

the second means displays a background plane of lines after a line including a cursor indicating an inputting or editing position of the character information at a depth position different from a depth position at which a background plane of the line including the cursor and lines before the line including the cursor is displayed.

Art Unit: 2629

7. Amended Claim 20 now reads:

20. (Currently Amended) A three-dimensional display apparatus for displaying two-dimensional images, by changing brightness, on a plurality of display planes placed at different depth positions as seen from an observer to display a three-dimensional stereoscopic image, the apparatus comprising:

first means for generating first two-dimensional images that are obtained by projecting a background plane onto the plurality of display planes along a line of sight of the observer;

second means for displaying the first two-dimensional images generated by the first means on the display planes respectively wherein brightness of each of the first two-dimensional images is determined independently for each display plane according to a depth position of a display object in a three-dimensional space [[if]] when brightness of the display object is darker than that of the background plane so as to display the background plane at an arbitrary position in the three dimensional space;

third means for generating second two-dimensional images that are obtained by projecting the display object onto the plurality of display planes along the line of sight of the observer; and

fourth means for displaying the second two-dimensional images generated by the third means on the display planes respectively in which brightness of each of the second two-dimensional images is set to be the same among the display planes irrespective of the depth position of the display object [[if]] when the brightness of the display object is darker than that of the background plane, wherein,

the display object is character information;

the background plane is a background of a screen on which the character information is input or edited; and

the second means displays a background plane of a line including a cursor indicating an inputting or editing position of the character information and lines after the line including the cursor at a depth position different from a depth position at which a background plane of lines before the line including the cursor is displayed.

8. Amended Claim 24 now reads:

24. (Currently Amended) A three-dimensional display apparatus for displaying two-dimensional images, by changing brightness, on a plurality of display planes placed at different depth positions as seen from an observer to display a three-dimensional stereoscopic image, the apparatus comprising:

first means for generating first two-dimensional images that are obtained by projecting a background plane onto the plurality of display planes along a line of sight of the observer;

Art Unit: 2629

second means for displaying the first two-dimensional images generated by the first means on the display planes respectively wherein brightness of each of the first two-dimensional images is determined independently for each display plane according to a depth position of a display object in a three-dimensional space [[if]] when brightness of the display object is darker than that of the background plane so as to display the background plane at an arbitrary position in the three dimensional space;

third means for generating second two-dimensional images that are obtained by projecting the display object onto the plurality of display planes along the line of sight of the observer; and

fourth means for displaying the second two-dimensional images generated by the third means on the display planes respectively in which brightness of each of the second two-dimensional images is set to be the same among the display planes irrespective of the depth position of the display object [[if]] when the brightness of the display object is darker than that of the background plane, wherein,

the display object is character information;

the background plane is a background of a table or a menu in which character information are arranged and from which a piece of character information can be selected; and

Art Unit: 2629

the second means displays a background plane of a selected character information part at a depth position different from a depth position at which a background plane of other character information is displayed.

Allowable Subject Matter

- 9. Claims 7, 8, 12, 19, 20, 24, and 37-44 (now renumbered Claims 1-14) are allowed.
- 10. The following is an examiner's statement of reasons for allowance: none of the references relied upon by the examiner, considered alone or in reasonable combination, teach or fairly suggest the limitations of the independent Claims 7, 8, 12, 19, 20, 24, and 37-44.

As pertaining to the most relevant art relied upon by the examiner, Bell et al. (hereinafter "Bell" US 2005 / 0206582) discloses (see Fig. 1, Fig. 2, and Fig. 4) a three-dimensional display method for displaying two-dimensional images, by changing brightness, on a plurality of display planes (i.e., 3, 4) placed at different depth positions as seen from an observer (8) to display a three-dimensional stereoscopic image, the method comprising: the claimed step of generating first two-dimensional images (i.e., 11, 12) that are obtained by projecting a background plane (11, 12) onto the plurality of display planes (3, 4) along a line of sight of the observer (8), and the claimed step of

Art Unit: 2629

generating second two-dimensional images (i.e., 6, 7) that are obtained by projecting a display object (6, 7) onto the plurality of display planes (3, 4) along the line of sight of the observer (8; see Page 5, Para. [0089] and Page 6, Para. [0098]-[0107]); and see Page 2, Para. [0022]-[0026]; Page 3, Para. [0030]-[0037], Para. [0040]-[0050], and Para. [0053]; Page 4, Para. [0062] and Para. [0073]-[0075]; and see Page 5, Para. [0081]).

Further, Suyama et al. (hereinafter "Suyama" US 6,525,699) explicitly discloses (see Fig. 3 through Fig. 8) a three-dimensional display method and associated display device for displaying two-dimensional images by changing brightness on a plurality of display planes placed at different depth positions as seen from an observer to display a three-dimensional stereoscopic image (see Col. 10, Ln. 32-67 through Col. 11, Ln. 1-60), wherein the brightness of each two-dimensional image is determined independently for each display plane according to a depth position of a display object in a three-dimensional space (again, see Col. 10, Ln. 32-67 through Col. 11, Ln. 1-60), and wherein brightness of the display object can be darker than that of a background plane (see Fig. 3 through Fig. 8) and wherein each two-dimensional image can be set to be the same among the display planes irrespective of a depth position of the display object if the brightness of the display object is darker than that of the background plane (see Col. 11, Ln. 48-52 and Fig. 3 through Fig. 8).

Further still, Sullivan (US 6,377,229) discloses (see Fig. 1 and Fig. 4 through Fig. 7) a three-dimensional display method for displaying two-dimensional images, by changing transparency, on a plurality of display planes (i.e., 36, 38, 40, 42) placed at

Art Unit: 2629

different depth positions as seen from an observer (12) to display a three-dimensional stereoscopic image (see Abstract; also see Col. 1, Ln. 25-41; Col. 1, Ln. 65-67 through Col. 2, Ln. 1-49; Col. 4, Ln. 31-67 through Col. 5, Ln. 1-67 through Col. 6, Ln. 1-32), wherein, the transparency of each of the two-dimensional images is changed independently for each display plane (36, 38, 40, 42; see Col. 10, Ln. 31-67 through Col. 11, Ln. 1-57). Further, Sullivan discloses (see Fig. 4 through Fig. 7) that the transparency of each two-dimensional image can be set to be the same among the display planes (36, 38, 40, 42) irrespective of the depth position of the display object if the brightness of the display object is brighter than that of the background plane (see Col. 10, Ln. 31-67 through Col. 11, Ln. 1-57).

However, none of the references relied upon by the examiner, considered alone or in reasonable combination, teach or fairly suggest the specific and deliberate implementations and brightness control functionality disclosed in the independent Claims 7, 8, 12, 19, 20, 24, and 37-44 (now renumbered Claims 1-14).

a. As pertaining to **Claim 7**, none of the relied upon references teach or fairly suggest the specific brightness control of two-dimensional image brightness to produce a background plane of lines after a line including a cursor indicating an inputting or editing position of the character information is displayed at a depth position different from a depth position at which a background plane of the line including the cursor and lines before the line including the cursor is displayed.

Art Unit: 2629

b. As pertaining to **Claim 8**, none of the relied upon references teach or fairly suggest the specific brightness control of two-dimensional image brightness to produce a background plane of a line including a cursor indicating an inputting or editing position of the character information and lines after the line including the cursor is displayed at a depth position different from a depth position at which a background plane of lines before the line including the cursor is displayed.

- c. As pertaining to **Claim 12**, none of the relied upon references teach or fairly suggest the specific brightness control of two-dimensional image brightness such that the background plane is a background of a table or a menu in which character information are arranged and from which a piece of character information can be selected; and a background plane of a selected character information part is displayed at a depth position different from a depth position at which a background plane of other character information is displayed.
- d. As pertaining to **Claim 19**, none of the relied upon references teach or fairly suggest the specific brightness control of two-dimensional image brightness such that the second means displays a background plane of lines after a line including a cursor indicating an inputting or editing position of the character information at a depth position different from a depth position at which a background plane of the line including the cursor and lines before the line including the cursor is displayed.

Art Unit: 2629

e. As pertaining to **Claim 20**, none of the relied upon references teach or fairly suggest the specific brightness control of two-dimensional image brightness such that the second means displays a background plane of a line including a cursor indicating an inputting or editing position of the character information and lines after the line including the cursor at a depth position different from a depth position at which a background plane of lines before the line including the cursor is displayed.

- f. As pertaining to Claim 24, none of the relied upon references teach or fairly suggest the specific brightness control of two-dimensional image brightness such that the background plane is a background of a table or a menu in which character information are arranged and from which a piece of character information can be selected; and the second means displays a background plane of a selected character information part at a depth position different from a depth position at which a background plane of other character information is displayed.
- g. As pertaining to **Claim 37**, none of the relied upon references teach or fairly suggest a brightness value determination step of determining whether a brightness value of the display object is equal to or less than a predetermined threshold and the brightness value of the display object is less than a brightness value of the background; and a brightness value calculation step of, when it is

Art Unit: 2629

determined that the brightness value of the display object is equal to or less than the predetermined threshold and the brightness value of the display object is less than the brightness value of the background, calculating the brightness value of each two-dimensional image of the background according to depth information of the display object and setting brightness values of the two-dimensional images of the display object to be the same.

- h. As pertaining to Claim 38, none of the relied upon references teach or fairly suggest a brightness value determination step of determining whether a brightness value of the display object is equal to or less than a predetermined threshold; and a brightness value calculation step of, when the brightness value of the display object is equal to or less than the predetermined threshold, changing the brightness value of the background to a value greater than the brightness value of the display object, and calculating the brightness value of each two-dimensional image of the background based on the changed brightness value according to depth information of the display object and setting brightness values of the two-dimensional images of the display object to be the same.
- i. As pertaining to **Claim 39**, none of the relied upon references teach or fairly suggest a brightness value determination step of determining whether a brightness value of the display object is equal to or greater than a predetermined

Art Unit: 2629

threshold and the brightness value of the display object is greater than a brightness value of the background; and a transparency value calculation step of, when it is determined that the brightness value of the display object is equal to or greater than the predetermined threshold and the brightness value of the display object is greater than the brightness value of the background, calculating a transparency value of each two-dimensional image of the background according to depth information of the display object and setting transparency values of the two-dimensional images of the display object to be the same.

j. As pertaining to Claim 40, none of the relied upon references teach or fairly suggest a brightness value determination step of determining whether a brightness value of the display object is equal to or greater than a predetermined threshold; and a transparency value calculation step of, when the brightness value of the display object is equal to or greater than the predetermined threshold, changing the brightness value of the background to a value less than the brightness value of the display object, and calculating the transparency value of each two-dimensional image of the background based on the changed brightness value according to depth information of the display object and setting transparency values of the two-dimensional images of I0 the display object to be the same.

Art Unit: 2629

- k. As pertaining to Claim 41, none of the relied upon references teach or fairly suggest brightness value determination means for comparing a brightness value of the display object with another brightens value; wherein, when it is determined that the brightness value of the display object is equal to or less than the predetermined threshold and the brightness value of the display object is less than the brightness value of the background by the brightness determination means, the brightness value calculation means calculates the brightness value of each two-dimensional image of the background according to depth information of the display object and sets brightness values of the two-dimensional images of the display object to be the same.
- I. As pertaining to Claim 42, none of the relied upon references teach or fairly suggest brightness value determination means for comparing a brightness value of the display object with another brightens value; wherein, when it is determined that the brightness value of the display object is equal to or less than the predetermined threshold by the brightness determination means, the brightness value calculation means changes the brightness value of the background to a value greater than the brightness value of the display object, and calculates the brightness value of each two-dimensional image of the background based on the changed brightness value according to depth information of the display object and sets brightness values of the two-

Application/Control Number: 10/586,263

Page 19

Art Unit: 2629

dimensional images of the display object to be the same.

- m. As pertaining to Claim 43, none of the relied upon references teach or fairly suggest brightness value determination means for comparing a brightness value of the display object with another brightens value; wherein, when it is determined that the brightness value of the display object is equal to or greater than the predetermined threshold and the brightness value of the display object is greater than the brightness value of the background by the brightness determination means, the transparency value calculation means calculates a transparency value of each two-dimensional image of the background according to depth information of the display object and sets transparency values of the two-dimensional images of the display object to be the same.
- n. As pertaining to **Claim 44**, none of the relied upon references teach or fairly suggest brightness value determination means for comparing a brightness value of the display object with another brightens value; wherein, when it is determined that the brightness value of the display object is equal to or greater than the predetermined threshold by the brightness determination means, the transparency value calculation means changes the brightness value of the background to a value less than the brightness value of the display object, and calculates the transparency value of each two- dimensional image of the background based on the changed brightness value according to depth

Art Unit: 2629

information of the display object and sets transparency values of the twodimensional images of the display object to be the same.

11. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON M. MANDEVILLE whose telephone number is (571)270-3136. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason Mandeville Examiner Art Unit 2629

/J. M. M./ Examiner, Art Unit 2629

> /Alexander Eisen/ Supervisory Patent Examiner, Art Unit 2629